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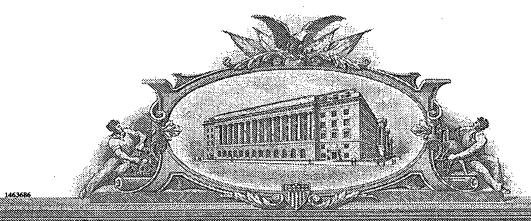
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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

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This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

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	Marc Chase	Weinstein		Roslyn Harbor, New York					
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March 23, 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE PROVISIONAL APPLICATION FOR LETTERS PATENT ENTITLED

ELECTRONIC DEVICE HAVING A SLIDABLE COVER

Invented by:

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Electronic Device Having A Slidable Cover

SUMMARY

[0001] An electronic device assembly includes at least one component, such as an LCD display or keypad, mounted in the housing of the device, which component can benefit from protection. A protective cover panel is slidably mounted to the housing and moveable to first and second positions relative to the housing. In one embodiment, the cover panel has a first portion that is solid so as to form a protective barrier, and a second portion that is at least partially used to form a viewing window. When the cover panel is in the first position, the first portion is aligned in juxtaposition with the component so as to form a protective cover over the component, and the second portion forms a viewing window that allows an image to be visible from a front of the device. When the cover panel is in the second position, the first portion is moved so as to allow the component to be visible to a user of the device, and the second portion is moved so as to extend past the housing of the device and display in the viewing window a supplemental image which is mounted on a portion of the cover panel so as to move with movement of the cover panel.

[0002] In an alternative embodiment of the invention, the cover can include two supplemental image substrates mounted for movement therewith, so that a combined image from both substrates is visible when the cover panel is in the second position, but only the image from one substrate is visible in the viewing window when the cover panel is in the first position.

[0003] In a further alternative embodiment of the invention, the cover includes a supplemental image substrate mounted for movement therewith, so that an image from the substrate is visible when the cover panel is in the second position, but when the cover panel is in the first position the image from that substrate is hidden behind a portion of the device housing, and an image on an outwardly facing portion of the housing is visible in the viewing window.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] These and other advantages of the invention will become apparent upon reading the following detailed description and upon referring to the drawings in which:

[0005] Fig. 1 shows a calculator embodiment of the invention, wherein the cover is in a closed position.

[0006] Fig. 2 shows the calculator embodiment of the invention, wherein the cover is in an open position.

[0007] Fig. 3 shows a side-section view of the calculator embodiment of the invention, wherein the cover is in the closed position.

[0008] Fig.'s 4 and 5 show enlarged side-section views of the top portion calculator embodiment shown in Fig.'s 1 and 2.

[0009] Fig.'s 6 and 7 show enlarged side-perspective views an alternative embodiment of the top portion calculator embodiment of the invention.

[0010] Fig.'s 8, 9 and 10 show photographs of two differently shaped calculators including the invention, where the covers are shown in the fully closed, partially open, and fully open positions, respectively.

[0011] While the invention will be described in conjunction with the illustrated embodiments, it will be understood that it is not intended to limit the invention to such embodiments. On the contrary, it is intended to cover all alternatives, modifications and equivalents as may be included within the spirit and scope of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0012] In a preferred embodiment the electronic device 10 of the present invention comprises a handheld or desk calculator, but can include any type of device which will benefit from a protective cover that moves in order to gain access to a component of the device, such as an LCD display or keypad, which is part of a calculator, PDA, a cell phone, etc.

[0013] In the embodiment of the invention shown in the drawings, a sliding panel 12 includes a lower portion 14 that covers an LCD display of a calculator, so as to provide protection for the LCD display 16 from scratching, dust or breakage when the device is not in use. This panel also includes an upper portion 18 that in the illustrated embodiment can form a viewing window by comprising an opening that reveals an image 20 printed on a substrate that is aligned with the viewing window. This substrate can be mounted in a fixed position inside or on the housing of the device (such as shown by image 22 in Fig.'s 6 and 7), or can be mounted to the cover so as to move in coordination therewith (such as shown by image 20 printed on substrate 24 in Fig.'s 1-5).

[0014] In order to reveal the LCD screen for use, the panel 12 is slidable relative to the housing of the device, using any one of several well known slidable mounting techniques, such as tracks or by using a groove, etc, not specifically shown. As the panel 12 slides upward, the upper portion thereof, comprising in the illustrated embodiment a viewing window 18, moves beyond the confines of the calculator housing. As it moves, more and more of the supplemental image is revealed in the viewing window. More specifically, in the embodiment shown in Fig.'s 1-5, a supplemental image substrate 26 is mounted to a top portion of the cover 12 so as to be viewable through the viewing window as the cover is moved past the confines of the housing. In this embodiment, when the cover is moved to the second position the original image displayed in the viewing window is no longer visible, since it is hidden behind the lower portion 14 of cover12.

[0015] In another embodiment of the invention, the cover can include first and second supplemental image substrates 24 and 26, mounted to the cover so as to be viewable through the viewing window as the cover is moved from the first position to the second position, i.e., as it moves past the confines of the housing. The first supplemental image may be translucent and include an image 20 thereon which is correlated with and "adds-to" the second supplemental image 20b. In this embodiment the housing includes a "divider substrate" 25 mounted at a fixed position therein, such as a white card, and the two supplemental image substrates 24 and 26 are positioned so that one falls on either side of the white card, as shown in Fig's 4 and 5. When the cover is in the first position, only the translucent image is visible through the viewing window,

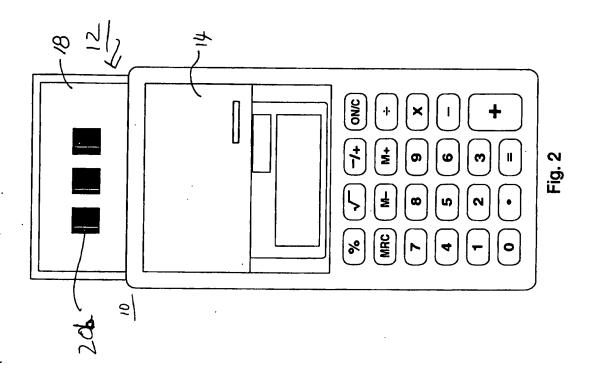
since it is on front of the white card, however, as noted above, an exciting effect happens as the cover is moved to the second position, since the first and second supplemental images combine as the viewing window extends past the boundary of the white card and the border of the housing, thereby changing the "display" in the viewing window from only the image 20 on the first substrate, to the combined image 20b of the first and second substrates.

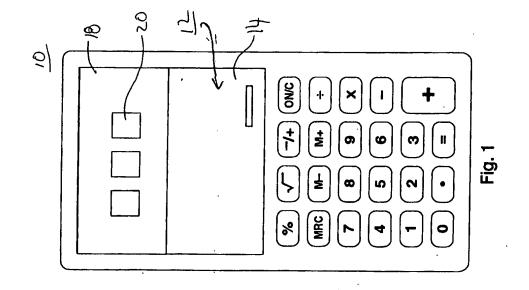
[0016] Thus, all of the embodiments of the invention described above make dual use of the user's movement of the protective cover to gain visual access to the LCD display, the first use being the conventional and expected use of uncovering the LCD display, but the second use being that the same movement also creates a separate and distinct effect by revealing an image, which can be visually exciting or provide information for the user.

[0017] While this invention has been particularly shown and described with references to preferred embodiments thereof, it will be understood by those skilled in the art that various changes in form and details may be made therein without departing from the sphere and scope of the invention. In fact, many such changes are already noted in this description but it should be realized that the above-noted changes were not exhaustive, and merely exemplary. Those skilled in the art will recognize, or be able to ascertain using no more than routine experimentation, many equivalents to the specific embodiments of the invention described herein.

[0018] For example, as described above, the panel may not have an initial image on a transparent substrate but may be solid, with or without some type of image or graphic on the solid panel. For example, Fig.'s 6 and 7 show the word "Logo" on the lower portion of the cover, and the upper "viewing window" portion of the cover shows an image "message" that is printed on the outside of the housing. Such message can be, for example: "What's Your Dose?" However, when the panel is moved upward, a new image is revealed in the viewing window in coordination with the movement of the cover, which image is printed, for example on a single substrate 26 of the type shown in Fig. 5, which image can be the message: "Your Dosage Is 150 mg.".

[0019] Thus, there has been provided in accordance with the invention a method and apparatus to achieve an exciting visual effect or provide additional image or information, when moving a protective cover on an electronic device, which fully satisfies the objects, aims and advantages set forth above. While the invention has been described in conjunction with specific embodiments thereof, it is evident that many alterative, modifications and variations will be apparent to those skilled in the art in light of the foregoing description. Accordingly, it is intended to embrace all such alternatives, modifications and variations as fall within the spirit and broad scope of the invention.





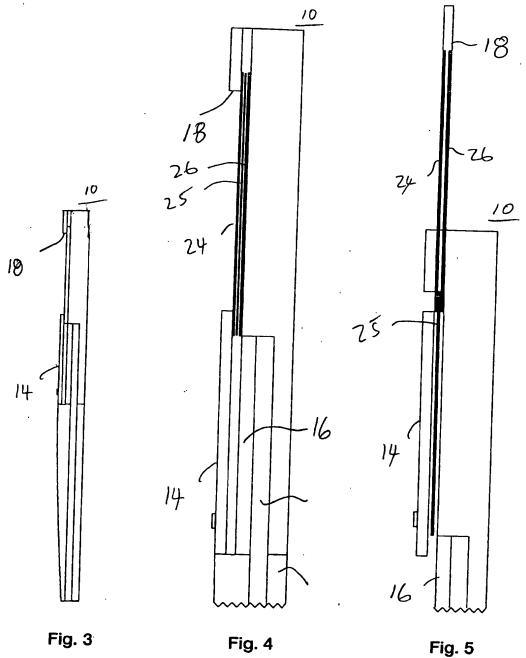
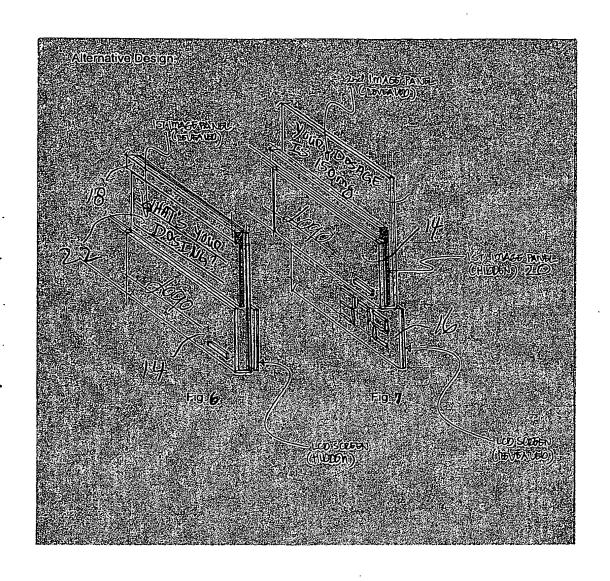
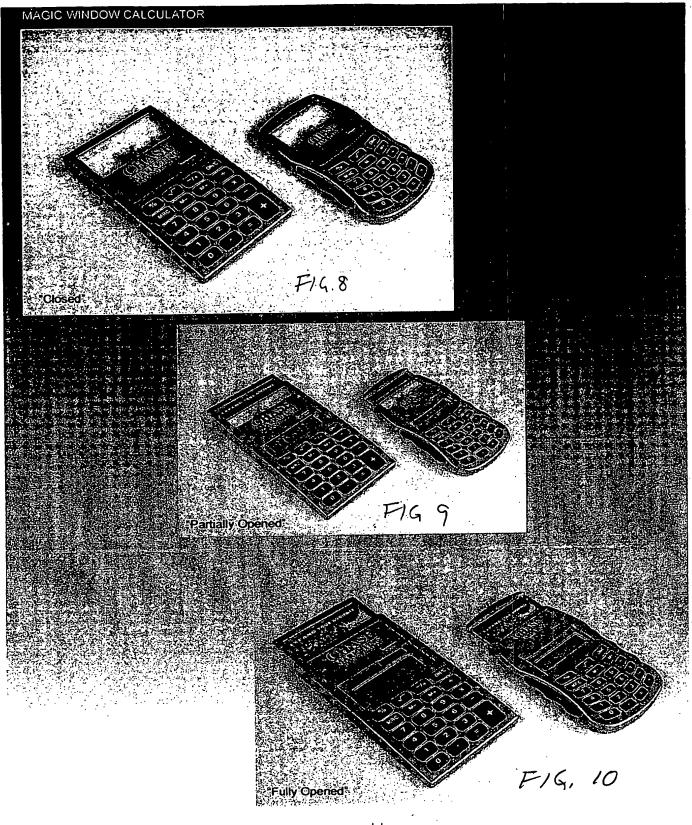


Fig. 5





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